

Date: Thu, 10 Nov 94 04:30:14 PST
From: Ham-Ant Mailing List and Newsgroup <ham-ant@ucsd.edu>
Errors-To: Ham-Ant-Errors@UCSD.Edu
Reply-To: Ham-Ant@UCSD.Edu
Precedence: List
Subject: Ham-Ant Digest V94 #373
To: Ham-Ant

Ham-Ant Digest Thu, 10 Nov 94 Volume 94 : Issue 373

Today's Topics:

Feeding an end-fed Zepp
 feeding a tower
Looking for Tower plans
Mail to paulr Returned
 Noise Question
 Pigeons on antenna
 Pigeons on beam
RF Safety Question.
Tennadyne antenna

Send Replies or notes for publication to: <Ham-Ant@UCSD.Edu>
Send subscription requests to: <Ham-Ant-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Ant Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-ant".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.


Date: Wed, 9 Nov 1994 20:20:25 GMT
From: greg@core.rose.hp.com (Greg Dolkas)
Subject: Feeding an end-fed Zepp

Well, my first real Ham antenna was a 3/2 wave end-fed Zepp. Nice antenna -
it's still in service. On mine, however, I fed it with Coax.

The feed line attaches to a 1/4 wave open wire matching section, which
transforms the low impedance of the coax to the high impedance at the end of
the antenna. As mentioned, it's basically a J-pole on its side.

coax feed

=====



+-----

<--1/4 wave--><----- odd halfwave multiple ----->

The open wire 1/4 wave section is made by paralleling the antenna wire with another wire about 1.5" apart. I used popsicle sticks dipped in wax for spacers.

I'm not sure how you'd do this with 450 ohm ladder line. Perhaps its as simple as changing the length of the 1/4 wave section (experiment!), or shorting the fed end of the matching section and tapping in your ladder line farther up. One end is 0 ohms (the short), the other end is high (2000+ ohms). 450 must be somewhere in between.

Good luck,

Greg KD6KGW

Date: 10 Nov 94 05:22:14 GMT
From: w5robert@blkbox.COM (Robert)
Subject: feeding a tower

On feeding a tower for 40/80 meter operation,
what would one use if the tower is UN-grounded??

--

73

Robert Wood
WB5CRG w5robert@blkbox.com

Date: Wed, 9 Nov 1994 16:22:07 GMT
From: serafin@epcot.spdc.ti.com (Mike Serafin)
Subject: Looking for Tower plans

I am looking for plans to construct a homebrew antenna tower. Either that or a pointer to a reference manual that would contain that type of information. Please post your information for the benefit of others that may be interested.

Thanks,
Mike
KC5GRW

Date: 10 Nov 94 09:00:46 GMT
From: RAMAIL-ADM@ram.NET
Subject: Mail to paulr Returned

The following message is being returned unread.

The message is addressed properly but the addressee
has not accessed their mailbox for at least 4 days

***** Message To: paulr@ram.net (Paul Ramey)

***** Unread Message Follows:

>From owner-ham-ant@UCSD.EDU
To: paulr@ram.net
Date: Sat, 5 Nov 94 04:30:23 PST
Reply-To: Ham-Ant@UCSD.EDU
Subject: Ham-Ant Digest V94 #366
Original-To: Ham-Ant@UCSD.EDU
Auto-Forward-From: pramey
Auto-Forward-Count: 1

Ham-Ant Digest Sat, 5 Nov 94 Volume 94 : Issue 366

Today's Topics:

 50 ohms why ?
 Dual Band J-Pole? (2 msgs)
 Experiences with Isotron limited space HF antennas (2 msgs)
 How good is 10 db 2 meter yagi? (3 msgs)
 How well will it work?
 Rotor And or tower wanted
 swr & xmission lines

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policies or positions of any party. Your mileage may vary. So there.

Date: 4 Nov 94 16:03:29 GMT
From: n1nlr@mara.ORG (Mark Greenlaw)
Subject: 50 ohms why ?

> Why choose 50 ohms as the stanard characteristic impedance for RF kit ?

> : This may be folklore, or maybe not, but the story I've heard was that it
> : was chosen during (or around) World War II because that's what #12 wire
> : inside 1/2" copper water pipe turns out to be.

The way I understand it is that the power capability and signal attenuation of coax depends upon its impedance. The loss is lowest at 75 ohms (why the TV and CATV people use it), You can handle the most power at 30 ohms. SO, if you take the geometric mean of these two you get 50 ohms or so! Makes sense. But, I still like the pipe and wire story.

73, Mark N1NLR @ Take your pick
e-mail n1nlr@mara.org
AX.25 n1nlr@n1jfu.#ema.ma.usa.noam
AMPR n1nlr@switch.foxboro.ampr.org

Date: Thu, 3 Nov 1994 19:10:51 GMT
From: hausman@patch.tandem.com (hausman_john)
Subject: Dual Band J-Pole?

In article <Cynpnz.Fo9@zimmer.CSUFresno.EDU>, rafael@zimmer.CSUFresno.EDU (Rafael Solis) writes:

>Folks!

>

>Is it possible to build a 2m/73cm dual band J-Pole? I'm asking since
>I bought one at a hamfest (made of aluminum rods) that the seller told
>me it would work with both bands. After seeing all the J-pole designs
>posted in this group I noticed that the measurements are different for
>each band. Did the seller lie to me? The antenna works great
>with my 2m rig, but I'm planning to buy a dual-band radio in the near
>future, will I have to buy another antenna?

>

>

>73 de Rafael, KE6JSRFrom hausman@patch.tandem.com Thu Nov 3 11:07:22 1994

This is mainly just based on my experience, I'm not sure about the theory.

I also use a 2-meter J-pole as a dual band 2 meter/440 antenna. I have been satisfied with it, but my requirements on 440 are pretty simple. I believe that it probably isn't a great match on 440, but most modern radios have SWR protection built into the amp so the worst that should happen is that the transmitter might decide to put out a little less power than it might otherwise and you might get more heat (dissipated reflected power), the second might shorten transmitter life on high power, but should be OK on low power.

As I said, my requirements were pretty simple:

- a single coax for my 2M/440 HT (I didn't want to have to swap coax to move from one band to the other)
- good performance on 2M (there are a number of repeaters I work there + packet where performance is more critical)
- able to hit a certain 440 repeater reliably
- cheap

The 440 repeater I wanted to work was marginal with my HT on high power going into its stock "rubber duck" antenna. Those antennas are typically pretty bad, so the J-pole didn't have much "competition". Also, just the fact that the J-pole was on the roof put it 30 feet higher than the "benchmark" rubber duck; that's a big difference on UHF. Anyway, it worked for me. I went from marginal on high power (rubber duck) to full quieting on low power. That's not very scientific, but it did everything I wanted (full quieting, lowest power, low cost).

Good luck,
...John WB6OHE

Date: Thu, 03 Nov 1994 08:58:09 -0600
From: kgk@nwu.edu (Kenneth Kalan)
Subject: Dual Band J-Pole?

In article <Cynpnz.Fo9@zimmer.CSUFresno.EDU>, rafael@zimmer.CSUFresno.EDU (Rafael Solis) wrote:

> Folks!
>
> Is it possible to build a 2m/73cm dual band J-Pole? I'm asking since
> I bought one at a hamfest (made of aluminum rods) that the seller told

> me it would work with both bands. After seeing all the J-pole designs
> posted in this group I noticed that the measurements are different for
> each band. Did the seller lie to me? The antenna works great
> with my 2m rig, but I'm planning to buy a dual-band radio in the near
> future, will I have to buy another antenna?

>

The Sept. 94 issue of QST, Page 61, has an article on how to build a
2m/70cm J Pole antenna using 300 ohm TV twin lead. So from that info, I'd
say yes there is a dual band J Pole. I may construct one just for fun.
If you have that issue available, check it out. That issue also has a how
to on building a quick charger.

Regards

Ken

Kenneth Kalan PP ASEL
Northwestern University
Prosthetics Research Laboratory
Rehabilitation Engineering Program
kgk@nwu.edu N9YIR

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Date: 3 Nov 1994 14:05:52 GMT
From: John Fleming <johnflem@mcs.com>
Subject: Experiences with Isotron limited space HF antennas

Riaydth,

I hope they work; I just ordered one (40). I'm a bit concerned over
all of the negative responses, but Ralph at Isotron seems very
knowledgeable and helpful; we'll see. I think that one big NEGATIVE
is that he doesn't offer a money-back guarantee; If I had a product
that could be re-stocked with relatively little preparation, I would
offer at least a 90% money-back guarantee on the thing. Well, my
\$70 is out the window, so I'll let you know my experiences next week.
It'll be a challenge, since I'll be using it roof-mounted for QRP.
If I can get out with it in Chicago, anybody can!

Date: Wed, 2 Nov 1994 19:43:07 GMT
From: alanb@hpnmarb.sr.hp.com (Alan Bloom)
Subject: Experiences with Isotron limited space HF antennas

Galen Watts (galen@picea.CFNR.ColoState.EDU) wrote:

: In article <CyLuq3.E6r@srgenprp.sr.hp.com> alanb@hpnmarb.sr.hp.com (Alan Bloom) writes:

: >

: >I used the 80 meter one on a Field Day many years ago. It worked about
: >as well as a dummy load. I found that if I shorted the coax center
: >conductor to shield and used the coax as a random wire, I got out much
: >better. (By "much better" I mean 10-20 dB)

: Did you just plug it in and go, or did you go thru the tuning procedure?

It was tuned up by one of our club members who was an Isotron dealer at the time. I assume he did it correctly.

: Did you have it out in the clear and up away from the ground?

It was mounted on a mast. I don't remember exactly how high it was, but it was well up in the clear.

The ads I have seen claim it is just as good as a full sized dipole. I would be very surprised if that's true, no matter how carefully it is tuned.

AL N1AL

Date: 2 Nov 1994 16:18:10 GMT
From: s_kwan@hk.super.net (Simon Kwan)
Subject: How good is 10 db 2 meter yagi?

Date: 2 Nov 1994 16:21:08 GMT
From: s_kwan@hk.super.net (Simon Kwan)
Subject: How good is 10 db 2 meter yagi?

Subject: How good is 10 db 2 meter yagi?
Newsgroups: rec.radio.amateur.antenna
Organization: Hong Kong SuperNet
Summary:
Keywords:

Hello fellow ham,

My new car whip 5/8 wavelength (2 meters) recently installed at my apartment does not

work well and I am looking into the use of a small Yagi. The antenna will be mounted at window since the roof is barred from access. Appreciate any comment from experience or calculation figure based on theory on the expected improvement on communication range improvement from a 10 db Yagi in down town city environment. Thanks in advance. Please reply by e-mail if possible.

73

Simon VR2YRD Hong Kong

Date: 2 Nov 1994 16:22:49 GMT
From: s_kwan@hk.super.net (Simon Kwan)
Subject: How good is 10 db 2 meter yagi?

Subject: How good is 10 db 2 meter yagi?
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Organization: Hong Kong SuperNet
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Hello fellow ham,

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73

Simon VR2YRD Hong Kong

Date: 31 Oct 1994 15:11 -0500
From: soderman@ewirb-wr.UCSD.EDU (SODERMAN.WALTER)
Subject: How well will it work?

In article <38v4q7\$5lp@chnews.intel.com>, Cecil_A_Moore@ccm.ch.intel.com writes...

>Also, horizontal multi-band dipoles work a lot better than inverted-V's
>on the higher bands where you get a cloverleaf radiation pattern.
>--
>73, Cecil, KG7BK, 00TC (All my own personal fuzzy logic, not Intel's)

Thanks, Cecil, for your advice. The reason I was going with the inverted-V is because I only have tiny trees and can't attach to the house, so I was looking

for a telescopic mast of some sort that I could use to create an apex with some good height. My understanding is that an 80/40 meter dipole would be next to worthless at a height of 15 feet off of the ground plane, and that's as high as my trees will get it. With the inverted vee arrangement, the ends would be about 12 to 15 feet up, and the apex would be on a mast around 30 or 35 feet up. Any ideas on this? Who makes a good mast for this? And, insofar as the 450 ohm ladder line is concerned...how do I connect a balanced line like the ladder line to my coax port on my xcvr which already has a built-in antenna tuner?

Walt KE4QOH

Date: 2 Nov 1994 23:11:08 -0500
From: jwolter@aol.com (JWolter)
Subject: Rotor And or tower wanted

I am looking for a tower and or rotor for a 5 sq ft. Antenna. The rotor must be able to handle 5 sq. ft windload. I live in Southern CA. If you also live in Southern CA. I can pick tower up. My other rotor just died. it was a homebrew that didn't work too well. If you have a rotor and or tower, let me know. Thanks
Jason

Date: 4 Nov 1994 20:38:25 GMT
From: lakeith@robins.af.mil (Larry CONTRACTOR Keith Mr.)
Subject: swr & xmission lines

SODERMAN.WALTER (soderman@ewirb-wr) wrote:
: does a balanced feeder provide lower swr naturally, or is it just easier to
: tune for a lower swr so that it "looks" better to the xcvr?

Neither..

Assuming that you intend to use the balanced feedline to feed an "all-band" antenna, the balanced feedline has less loss than coax when the SWR is high, as it is going to be with such an antenna.

What are you trying to do?

73,

Larry, KQ4BY

End of Ham-Ant Digest V94 #366

Date: 9 Nov 1994 23:25:49 GMT
From: wlhamaty@uncc.edu (W Luke Hamaty)
Subject: Noise Question

In article <sdarragh-071194152136@sdarragh-mac.cisco.com>,
Scott Darragh <sdarragh@cisco.com.3> wrote:
>1. About every 5-10 seconds I get a 3-5 second "storm" of noise and it
>completely blocks out signals from sending stations.

I've heard of thermostats doing that. Any kind of electric blanket or
space heater has the same kind of mechanism. An aquarium heater is a
similar possibility (the timing might be about right).

Is the QRN less on higher frequencies? Does it show up on VHF? In
general, at least for certain kinds of noise, the higher up you can
hear it, the closer it is.

Hope this helps.
73 de KQ40Q

--
[-----]
| Luke Hamaty KQ40Q "More than gold, I love to complain." |
| Impact Technologies Group - Trurl, from The Cyberiad |
| |
704-549-1100 ext. 232

Date: 9 Nov 94 20:29:00 GMT
From: MUENZLERK@uthscsa.EDU (Muenzler, Kevin)
Subject: Pigeons on antenna

You might try a rubber snake. As in the plastic owl, the eyes are very
important. They must be shiny...

Kevin

Legal stuff:
The above opinions are my own and not necessarily those of the staff,

faculty, administration, or lab animals (woof!) of The University of Texas Health Science Center at San Antonio or anyone else who is not me.

Kevin R. Muenzler, WB5RUE The University of Texas Health
muenzlerk@uthscsa.edu Science Center at San Antonio,
 Department of Computing Resources

Liberals measure compassion by how many people they are helping.
Conservatives measure compassion by how many people no longer need
their help.

--Jack Kemp

 | I am Voltohm of Borg!
 | Resistance is E/I!
 | Power is EI!

Date: 9 Nov 94 18:48:11 GMT
From: CCS_MAH@ADMIN.FANDM.EDU (Mark Hemlick Ph. D.)
Subject: Pigeons on beam

Goran wrote:

>> Does anyone have an idea how to protect a beam from pigeons?

There is an interesting suggestion in the 1987 edition of "Hints and Kinks". The author put lightweight pieces of plastic tubing over antenna elements. Birds trying to grip the plastic tubing rotate, lose their balance and can't hold onto the element. Almost like they're "log rolling" on your beam elements. The author says nothing about how/if the plastic tubing affects antenna performance, wind loading, or ice loading.

Best wishes
Mark KA3LFG

Date: 8 Nov 1994 18:20:05 -0500
From: joen9yjz@aol.com (Joe N9YJZ)
Subject: RF Safety Question.

I will be installing a 2m yagi antenna w/ about 13dB gain in my attic. I will be operating my rig apx. 20 feet from it, through a ceiling, and on the second floor. I would really like to know what risks I may be at; my VHF radio can do 50 watts, so please take that into

consideration. Any help would be appreciated. Please reply to my e-mail address. Thanks again!

Joe Moschella, N9YJZ JoeN9YJZ@AOL.COM

Date: 9 Nov 94 23:56:21 GMT
From: mutual.advantage@filebank.COM
Subject: Tennadyne antenna

Quoting Marvin, WB4OKM

>I am thinking of purchasing a TENNADYNE log periodic antenna . These
>folks are located in Colorado and I am not familiar with them. Anyone
>out there have one of their antennas?

I have been using a Tennadyne 10-element HF (13-30 MHz) log-periodic-dipole-array for three years. It is well suited to my needs.

My qth is on high ground, outside of Boulder, Colorado, where wind survival is a primary consideration (unless frequent repair or installation of antennas is your joy). This antenna is very rugged, a fact that I attribute to the twin boom design, which allows all elements to be solidly attached to a boom with no insulators. And, of course, the log-periodic design means that the elements are free of traps that present wind load and failure points. The antenna once withstood a two-day wind-storm that sheared a safety pin in my mast-to-rotator connection. The result was that the antenna weathervaned into the wind (worst case position) and all elements took the full load for most of two days. At peak gusts, all 20 element tips were pointing directly downwind -- it looked like a giant trilobite fossil in the sky! When the storm was over the antenna was as true as the day it went up. Peak winds in that storm were measured at 160+ mph at the nearby National Center for Atmospheric Research.

As an antenna, I have only anecdotal evidence -- lacking an antenna range. But, I am active on the local DX Cluster where I have frequent opportunities to compare signal reports with the best installations on the Colorado Front Range. I believe I probably benefit from an outstanding site, but in general, this antenna appears to be at least the equal of any 3-element monobander on all 5 bands in the 13-30 MHz range.

Contrary to log-periodic mythology, the VSWR is less than flat across all bands. There are points in some bands where the VSWR rises enough to

slightly reduce the output power of a modern solid-state rig if no antenna tuner is used. My preferred tuner is the pi-network output stage of my trusty old Henry amplifier, which has no trouble at all loading into the antenna on any frequency, and which adds a little something that no antenna tuner can -- POWER! :-)

Igottago, 73 de KF0IA ..
Stan.Huntting@filebank.com
Boulder, CO
USA

* CMPQwk #1.4 * UNREGISTERED EVALUATION COPY

Date: 9 Nov 1994 22:18:01 GMT
From: moritz@ipers1.e-technik.uni-stuttgart.de ()

References<39dja6\$i8d@hopper.acm.org> <1994Nov5.013527.25932@ke4zv.atl.ga.us>,
<1x5lkK7gXfNV073yn@iglou.com>
Subject: Re: Just say NO to RG58!

You forgot to mention that antenna problems are usually scheduled
before contests.

Date: Tue, 8 Nov 1994 21:43:06 GMT
From: veltman@netcom.com (paul Veltman)

References<9411071629.AA13018@royac4.royac.iac.es>
<39o8pb\$8iv@newsbf01.news.aol.com>, <39ob6l\$7dp@mozo.cc.purdue.edu>
Subject: Re: Pigeons on beam

Mark D. Conner (mconner@rain.atms.purdue.edu) wrote:
: In article <39o8pb\$8iv@newsbf01.news.aol.com> dbotkin@aol.com (D Botkin) writes:
: >In article <9411071629.AA13018@royac4.royac.iac.es>,
: >hosinsky@royac4.royac.iac.ES (goran hosinsky) writes:
: >
: > Does anyone have an idea how to protect a beam from pigeons?
: >
: >I saw a picture in QST (I think) of a good idea - a guy put a plastic owl
: >on top of his beam. Says the pigeons have left and never returned. The
: >owl came from a garden supply store, intended for use to keep birds &
: >bunnies from gardens, and looked quite realistic.

: Must be very realistic or the pigeons are easily fooled. Most of the

: plastic owls I've seen have pigeon **** all over them.

: Supposedly the eyes make or break the "decoy". If they're glass or
: are otherwise shiny, that does better than an owl with a painted face
: and eyes.

: --

: Mark D. Conner - N9XTN Opinions expressed here are
: Dept. of Earth & Atmospheric Sciences not necessarily those of the
: Purdue Univ., W. Lafayette IN 47907 Government, DoD, Purdue, or
: mconner@rain.atms.purdue.edu the author.

I've never heard of a pigeon in Mensa. Seriously, out here, the owls work
for a little while, and then the pigeons come back.

de Paul WA6OKQ

Date: 8 Nov 1994 04:38:08 -0400
From: btrembla@shark.stmarys.ca (Bernard D. Tremblay (Ben))

References<395rea\$225@masala.cc.uh.edu> <39hab5\$1d3@bcfreenet.seflin.lib.fl.us>,
<Pine.SUN.3.91.941106074458.13237A-100000@ume>
Reply-To: ab006@cfn.cs.dal.ca
Subject: Re: How much directionality to slightly inverted vee?

In article <Pine.SUN.3.91.941106074458.13237A-100000@ume>, Rick Zabrodski
<zabrods@med.ucalgary.ca> says:

>

Last week I had a wonderful couple of sessions with ELNEC on the
networked '486 here ... getting ready for Sweepstakes weekend; running
QRP into phased verts N/S (more or less) and I wanted to suck the lobes
over to a fat lobe SW<-->NW. Well, I didn't manage but here's my point:

If someone could tell me how to get WinVN newsreader to read-in files, I'd
gladly run some specs for you!

Ben VE1CBV (X-VE6BIU / VE8YI / VE6BBT / VE1LQ)

Date: 8 Nov 94 21:54:54 EST
From: downing001@wctsub.ctstateu.edu

References<39o8pb\$8iv@newsbf01.news.aol.com> <39ob61\$7dp@mozo.cc.purdue.edu>,
<39odkp\$30c@masala.cc.uh.edu>

Subject: Re: Pigeons on beam

>>> Does anyone have an idea how to protect a beam from pigeons?

I heard a discussion on a local repeater awhile ago on a similar vein, where somebody had low radials over the deck where the birds liked to land and make a mess. He solved it by sliding some loose-fitting thin, plastic tubing over each radial. When the bird landed on it, the weight would cause the tubing to spin around, and he had some very surprised birds *-0

Of course, if your beam has traps, you have to make the tubing _very_ large. Also, you might need to re-tune after installation, since it would be somewhat like using an insulated element. Your mileage may vary.

73

End of Ham-Ant Digest V94 #373
